Cambodian Center for Study and Development in Agriculture

Integrated commercial farm for small farmers in Samrong district, Takeo Province (ICM)

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Overview of CEDAC and ICM project

- CEDAC is an agriculture and rural development organization set up in August 1997, with initial support from the French NGO, GRET. As of Nov 2010, CEDAC was active in 3617 villages,621 communes, 105 districts and 20 provinces, working with 124,000 families.

- With funding support from UNDP GEF SGP, CEDAC implemented the project called *Integrated commercial farm for small farmers in Samrong district, Takeo Province (ICM).* From July 2009 to December to 2010.

- **The overall goal:**
  - **develop integrated commercial farm**
  - **sustainable in their agricultural production**
  - **compatible with climate change adaptation and habitats of biodiversity.**

Rationale for the ICM Project

1. Low agricultural productivity due to a lack of agricultural extension services
2. Unsustainable agricultural practices (use of hybrid seeds, chemical fertilizers and pesticides…etc), some leading to soil degradation.
3. Extreme drought in recent years has meant that farmers lack sufficient water for agricultural production.
4. Most of farmer families have insufficient productivity to feed themselves, especially in the dry season.
5. Lack of irrigation facilities

Overview of Outputs

- 33 integrated farming developed and playing as demonstration place.

- 35 farmer families applied system of rice intensification

- 34 households applied home gardening

Overview of Outputs (cont.)

- 35 applied compost making technique
- 5 chicken producer groups and 6 organic rice producer groups were formed
- Dissemination mechanisms developed through training 36 representatives of 14 CBOs to transfer their knowledge and skills to more than 160 farmers

Climate Resilient Agricultural Techniques

- **Organic soil matter is enhanced** through crop rotation, composting, covering crops, ecological System of Rice Intensification (SRI), mulching, home gardening, multi-purpose tree, fish raising and agro-forestry systems.
- **Water Management** through an integrated farming system (Multi-Purpose Farm) and establishing small scale irrigation systems including a pond and canal.
- Adoption of **pest and disease management** by ecological ways.
- Conservation and **improving local seeds** or variety of crops.

Linkage with Climate Change Adaptation

Type of techniques	Linkage with climate change adaptation
SRI, Ecological Chicken Raising (ECR), Home gardening	- Organic matter increased to - soil fertility - water holding capacity for better drought resilience; -Less rice seed needed to produce higher yields - Increase food security and nutrition - Reduce green house gas
Multi-Purpose Farm	-Improved ecological system and bio-diversity - Adaptive to drought and floods - Reduced external inputs and increased productivity - Increased variety of produce - Increased water absorption -Provide firewood - Capacity for carbon to be stored in soil
Water harvesting and management	Water storage for increased adaptation incase of drought and floods
Farmer organization	Adaptive capacity (knowledge networks, experimentation and innovation)

Outcome and impacts

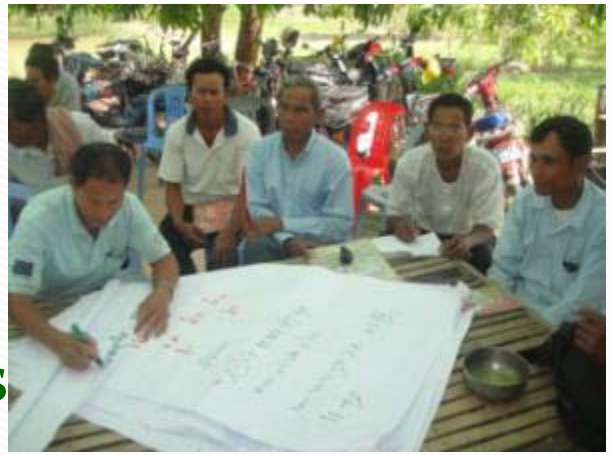
- 60% of target families have now stopped using chemical fertilizers
- Rice productivity increased 3 tons to 4 t/ha on average
- Participating farmers reduced buying external food for family consumption especially vegetables and meat
- Income is doubled to about 7 million riels/year
- Sustainable information dissemination mechanism developed through gaining high levels of leadership and agricultural skills and knowledge and developing demonstration farms
- Overall, cooperating farmers changed to become food suppliers and commercial farm entrepreneurs.

Key good practices and lessons learned

- Include women's opinions in creating long term visions
- Farm mapping
- Analyzing the usefulness of integrated farming systems
- Farmer led experimentation
- Farmer to farmer information sharing
- Building farmer organizations and networks

Key Recommendation

- Integrated ecological farming contributes to climate change adaptation and mitigation
- Promote the use of renewable local inputs
- Building community structures to create community resilience against climate change
- Create opportunities for farmers to access resources to develop demonstration and commercial farms



Thanks